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APPLICATION NO.	FILING DATE	· FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/390,079	09/03/1999	DARREN KERR	112025-0167	6305
75	90 05/21/2004		EXAMINER	
A SIDNEY JOHNSTON			ELLIS, RICHARD L	
CESARI AND MCKENNA LLP 88 BLACK FALCON AVENUE			ART UNIT	PAPER NUMBER
BOSTON, MA 02210			2183	23
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Please find below and/or attached an Office communication concerning this application or proceeding.

1/

	Application No.	Applicant(s)				
	09/390,079	KERR ET AL.				
Office Action Summary	Examiner	Art Unit				
	Richard Ellis	2183				
 The MAILING DATE of this communication app Period for Reply 	ears on the cover sheet with the c	correspondence address -				
A SHORTENED STATUTORY PERIOD FOR REPLY THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a reply If NO period for reply is specified above, the maximum statutory period w Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	36(a). In no event, however, may a reply be ting within the statutory minimum of thirty (30) day will apply and will expire SIX (6) MONTHS from cause the application to become ABANDONE	nely filed s will be considered timely. the mailing date of this communication. D (35 U.S.C. § 133).				
Status						
1) Responsive to communication(s) filed on 14 Ap	oril 2004.					
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Disposition of Claims		•				
4) ☐ Claim(s) 1-21,28-36 and 38-53 is/are pending i 4a) Of the above claim(s) is/are withdraw 5) ☐ Claim(s) is/are allowed. 6) ☐ Claim(s) 1-21,28-36 and 38-53 is/are rejected. 7) ☐ Claim(s) is/are objected to. 8) ☐ Claim(s) are subject to restriction and/or	vn from consideration.	·				
Application Papers						
9) The specification is objected to by the Examine	r					
10)☐ The drawing(s) filed on is/are: a)☐ accepted or b)☐ objected to by the Examiner.						
Applicant may not request that any objection to the	• • •	• • • • • • • • • • • • • • • • • • • •				
Replacement drawing sheet(s) including the correcting 11) The oath or declaration is objected to by the Extended to be the Extended to the Ext	• • • • • • • • • • • • • • • • • • • •	•				
Priority under 35 U.S.C. § 119						
12) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of: 1. Certified copies of the priority documents 2. Certified copies of the priority documents 3. Copies of the certified copies of the prior application from the International Bureau * See the attached detailed Office action for a list of	s have been received. s have been received in Applicati ity documents have been receive (PCT Rule 17.2(a)).	on No ed in this National Stage				
Attachment(s)						
1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date	4) Interview Summary Paper No(s)/Mail Da 5) Notice of Informal P 6) Other:					

- 1. Claims 1-21, 28-36, and 38-53 remain for examination.
- 2. The drawings are objected to under 37 CFR § 1.83(a). The drawings <u>must</u> show every feature of the invention specified in the claims. Therefore, the "micro-opcodes to initiate memory prefetches without requiring a dedicated instruction" claimed in claim 45 must be shown or the feature canceled from the claim. No new matter should be entered.
- 3. Applicant is required to submit a proposed drawing correction in response to this Office Action. Any proposal by the applicant for amendment of the drawings to cure defects must consist of two parts:
 - a) A separate letter to the Draftsman in accordance with MPEP § 608.02(r); and,
 - b) A print or pen-and-ink sketch showing changes in *red ink* in accordance with MPEP § 608.02(v).
- 4. 35 USC § 101 reads as follows:

"Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title".

5. Claims 36 and 52 are rejected under 35 USC § 101 because the claimed invention is directed to non-statutory subject matter. Applicant's claims 36 and 52 attempt to claim electromagnetic signals. Electromagnetic signals are not patentable because they do not fall within one of the statutory classes of subject matter allowed by 35 USC § 101.

To define what is meant by a signal one must begin with basic concepts of the physical world. As explained in Gillespie et al., Chemistry 2 (Allyn and Bacon, Inc. 1986):

"We can describe the universe, and all the changes occurring in it, in terms of two fundamental concepts: matter and energy. Matter is anything that occupies space and has mass. Water, air, rocks, and petroleum, for example, are matter, but heat and light are not; they are forms of energy. The many different kinds of matter are known as substances. ..."

When referring to "structure" or "material" or "substance" what is being referred to is matter and things made up of matter. Energy is further defined at Chemistry 53:

"The capacity to do work is called energy. Gasoline, for example, possesses energy because when it is burned, it can do the work of moving a car. We measure energy by the work done, and thus energy, like work, is measured in joules.

In practice, it is convenient to distinguish different forms of energy, such as heat energy, light energy, electric energy, and chemical energy. ..."

Energy has physical existence because it is capable of doing work and of being measured, but is incorporeal.

The claimed electromagnetic signal is a form of electric energy which has physical existence as an electromagnetic wave in a communications path or as an electrical voltage in the circuits of a transmitter or receiver. This is distinguished from the use of the term signal to refer to an abstract quantity such as a number. See <u>In re Walter</u>, 618 F.2d 758, 770, 205 USPQ 397, 409 (CCPA 1980) ("The 'signals' processed by the inventions of claims 10-12 may represent either physical quantities or abstract quantities; the claims do not require one or the other").

The starting point for nonstatutory subject matter analysis is the statute, 35 USC § 101, and the Supreme Court's basic principles as enunciated in <u>Diamond v. Diehr</u>, 450 U.S. 175 (1981). As stated in <u>In re Warmerdam</u>, 33 F.3d 1354, 1358, 31 USPQ2d 1754, 1758 (Fed. Cir. 1994):

"Despite the oft-quoted statement in the legislative history of the 1952 Patent Act that Congress intended that statutory subject matter "include anything under the sun that is made by man," S. Rep. No. 1979, 82d Cong., 2d Sess., 5 (1952), reprinted in 1952 U.S.C.C.A.N. 2394, 2399; H.R. Rep. No. 1923, 82d Cong., 2d Sess., 6 (1952), Congress did not so mandate. Congress included in patentable subject matter only those things that qualify as "any . . . process, machine, manufacture, or composition of matter, or any . . . improvement thereof. . . . " 35 U.S.C. § 101. . . .

To include some things is to exclude others. The chore of defining exactly what is excluded under § 101, and applying such definitions to specific cases, has caused courts to expend much effort in trying to find the right words to describe some rather abstract notions. In <u>Diamond v. Diehr</u>, 450 U.S. 175 (1981), the Supreme Court summarized the scope of the § 101 exclusion and the Court's prior efforts at describing it by saying "[e]xcluded from such patent protection are laws of nature, natural phenomena, and abstract ideas. ... Our recent holdings in <u>Gottschalk v. Benson</u> and <u>Parker v. Flook</u>, both of which are computer-related, stand for no more than these long-established principles." <u>Id</u>. at 185.

Two comments are relevant. <u>First</u>, subject matter must first fall within § 101 before the exclusions apply. See <u>In re Pardo</u>, 684 F.2d 912, 916, 214 USPQ 673, 677 (CCPA 1982) ("[A]ny process, machine, manufacture, or composition of matter constitutes statutory subject

matter unless it falls within a judicially determined exception to section 101."); In re Sarkar, 588 F.2d 1330, 1333, 200 USPQ 132, 137 (CCPA 1978) ("[A] series of steps is a 'process' within § 101 unless it falls within a judicially determined category of nonstatutory subject matter exceptions."). Second, it is not certain that "laws of nature, natural phenomena, and abstract ideas" represent an exhaustive set of statutory subject matter exclusions, such that "laws of nature, natural phenomena, and abstract ideas" combined with the set of "process, machine, manufacture, or composition of matter" comprises a universal set all possible types of subject matter. Thus, subject matter is not presumed to be statutory under 35 U.S.C. § 101 if it does not fit within the enumerated exclusions of "laws of nature, natural phenomena, and abstract ideas." The proper analysis is to determine whether the claimed subject matter falls within one of the four classes of § 101 and, if so, whether the subject matter falls within one of the exclusions.

First the claimed signal is analyzed under the definitions of the four statutory classes of § 101. The claimed signal is clearly not a "process" under § 101 because it is not a series of steps. The other three § 101 classes of machine, compositions of matter and manufactures "relate to structural entities and can be grouped as 'product' claims in order to contrast them with process claims." D. Chisum, Patents § 1.02 (1994). The three product classes have traditionally required physical structure or material (matter).

"The term machine includes every mechanical device or combination of mechanical device or combination of mechanical powers and devices to perform some function and produce a certain effect or result." Corning v. Burden, 56 U.S. (15 How.) 252, 267 (1854). A modern definition of machine would no doubt include electronic devices which perform functions. Indeed, devices such as flip-flops and computers are referred to in computer science as sequential machines. The claimed signal has no physical structure, does not itself perform any useful, concrete and tangible result and, thus, does not fit within the definition of a machine.

A "composition of matter" "covers all compositions of two or more substances and

includes all composite articles, whether they be results of chemical union, or of mechanical mixture, or whether they be gases, fluids, powders or solids." Shell Development Co. v. Watson, 149 F. Supp. 279, 280, 113 USPQ 265, 266 (D.D.C. 1957), aff'd, 252 F.2d 861, 116 USPQ 428 (D.C. Cir. 1958). The claimed signal is not matter, but a form of energy, and therefore is not a composition of matter.

The Supreme Court has read the term "manufacture" in accordance with its dictionary definition to mean "the production of articles for use from raw or prepared materials by giving to these materials new forms, qualities, properties, or combinations, whether by hand-labor or by machinery." Diamond v. Chakrabarty, 447 U.S. 303, 308, 206 USPQ 193, 196-97 (1980) (quoting American Fruit Growers, Inc. v. Brogdex Co., 283 U.S. 1, 11, 8 USPQ 131, 133 (1931), which, in turn, quotes the Century Dictionary). Other courts have applied similar definitions. See American Disappearing Bed Co. v. Arnaelsteen, 182 F. 324, 325 (9th Cir. 1910), cert. denied, 220 U.S. 622 (1911). These definitions require physical substance, which the claimed signal does not have. Congress can be presumed to be aware of an administrative or judicial interpretation of a statute and to adopt that interpretation when it re-enacts a statute without change. Lorillard v. Pons, 434 U.S. 575, 580 (1978). Thus, Congress must be presumed to have been aware of the interpretation of manufacture in American Fruit Growers when it passed the 1952 Patent Act.

A manufacture is also defined as the residual class of product. Chisum, § 1.02[3] (citing W. Robinson, The Law of Patents for Useful Inventions 270 (1890)). A product is a tangible physical article or object, some form of matter, which the claimed signal is not. That the other two product classes, machine and composition of matter, require physical matter is evidence that a manufacture was also intended to require physical matter. The claimed signal, a form of energy, does not fall within either of the two definitions of manufacture.

Continuing to look at the § 101 class of manufacture, in <u>In re Hruby</u>, 373 F.2d 997, 153 USPQ 61 (CCPA 1967), the CCPA held that there was no distinction between the meaning of "manufacture" in § 101 and "article of manufacture" in § 171 for designs. The issue in

Hruby was whether that portion of a water fountain which is composed entirely of water in motion was an article of manufacture. The CCPA relied on the analysis of the term manufacture in <u>Riter-Conley Mfg. Co. v. Aiken</u>, 203 F. 699 (3d Cir.), <u>cert. denied</u>, 229 U.S. 617 (1913), a case involving a utility patent. The CCPA stated in Hruby, 373 F.2d at 1000, 153 USPQ at 65:

"The gist of it is, as one can determine from dictionaries, that a manufacture is anything made "by the hands of man" from raw materials, whether literally by hand or by machinery or by art."

The CCPA held that the fountain was made of the only substance fountains can be made of --water-- and determined that designs for water fountains were statutory. Articles of manufacture in designs manifestly require physical matter to provide substance for embodiment of the design. Thus, since "article of manufacture" under § 171 has the same meaning as "manufacture" under § 101, it is inevitable that a manufacture under § 101 requires physical matter.

Some indirect evidence that Congress intended to limit patentable subject matter to physical things and steps is found in 35 USC § 112 paragraph 6. Paragraph 6 states that an element in a claim for a combination may be expressed as a "means or step" for performing a function and will be construed to cover the corresponding "structure, material, or acts described in the specification and equivalents thereof." "Structure" and "material" indicate tangible things made of matter, not energy.

The claimed signal does not fit clearly within one of the three <u>Diehr</u> exclusions of "laws of nature, natural phenomena or abstract ideas." A signal may be an abstraction because it is disembodied in the sense of having no physical structure. Even if the signal were a signal in a wire, which requires movement of physical matter such as electrons, the signal is the propagating disturbance in the medium, not the medium itself. In any case, however, the exclusions are not controlling because subject matter must first fall within § 101 before the exclusions apply. <u>Pardo</u> and <u>Sarkar</u>, supra.

The following in a quotation of the first paragraph of 35 USC 112:

· 6.

7.

8.

9.

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 45 is rejected under 35 USC § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claimed "micro-opcodes to initiate memory prefetches without requiring a dedicated instruction" of claim 45 is not described within the specification, therefore, because it is not described, it is impossible that the inventors had possession of the claimed invention at the time of filing.

Claim 45 is rejected under 35 USC 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claimed "micro-opcodes to initiate memory prefetches without requiring a dedicated instruction" is not described in the specification or drawings. Therefore, due to lack of description, it is not possible for the specification to enable one skilled in the art to make and/or use the invention.

Claims 36, 52, and 53 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claims(s) to place the claim(s) in proper dependent form. Claims 36 and 52 claim the invention of claim 9 and claim 46 (respectively) embodied in electromagnetic signals propagating over a computer network. However, because a computer is an electromagnetic signal apparatus, in order for the systems of claims 9 and 46 to be performed in a computer system, the methods embodied therein must be embodied in electronic signals propagating over a computer network. In this case, the signal conductors that make up the computer hardware are a "computer network" to the extent that term is defined by the claim language. Accordingly, the system of claims 9 and 46 must inherently be embodied as electromagnetic signals propagating over a computer network in order for a

system of claims 9 and 46 to operate, and therefore a dependent claim which states that the system is embodied in electromagnetic signals propagating over a computer network does not add anything which is not already present in the independent claim. Claim 53 claims the system of claim 46 embodied on a computer readable medium. However, in order for any computer to operate, all data and programs needed for it's operation must reside somewhere on some computer readable medium. Therefore, parent claim 46 inherently has it's claimed system present upon a computer readable medium, and as a result, a claim stating that the system is present upon a computer readable medium does not add anything which is not already inherently present in the parent claim.

- 10. Claims 46-51 rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
 - 10.1. The scope of meaning of the following terms are unclear:
 - 10.1.1. "specifies one of" claim 46; This claim contains the phrase "specifies one of" without reciting a set of two or more items from which to select "one of" from. It appears that the words "one of" should be deleted from the claim to remove any ambiguity as to whether the claim intended to claim a single item, or one item selected from a set of possible items. Claims 47-51 inherit the ambiguity from their parent claim 46.
- 11. The following is a quotation of 35 USC § 103 which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
 - (c) Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.
- This application currently names joint inventors. In considering patentability of the claims under 35 USC § 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 USC § 102(f) or (g) prior art under 35 USC § 103.
- 13. Claims 1-21, 28-36, and 38-53 are rejected under 35 USC § 103 as being unpatentable

over Nakada, U.S. patent 5,638,526, in view of Asato, U.S. Patent 6,145,074.

Nakada and Asato were cited as prior art references in paper number 15, mailed June 27, 2003.

- 14. The rejections are respectfully maintained and incorporated by reference as set forth in the last office action, paper number 15, mailed June 27, 2003. As to claims 1-21, 36, and 38-39, they are rejected under Nakada in view of Asato for the same reasons as the rejections of claims 28-35 and 40-53 presented in the previous office action, paper number 15.
- 15. Applicant's arguments filed April 14, 2004, paper number 21, have been fully considered but they are not deemed to be persuasive.
- 16. In the remarks, applicant argues in substance:
 - 16.1. That: "Applicant would like to direct the Examiner's attention to the box labeled 506 in Fig. 5 of the drawings. As the text at page 10, lines 23-24 of the specification describes, box 506 depicts "a 10 bit C part 506 comprising three micro-opcode fields." Applicant respectfully requests the objection to the drawings be withdrawn in light of box 506 of Fig. 5."

This is not found persuasive because the drawing and portion of the specification applicant has indicated provide support for "micro-opcodes" while the claim is claiming "micro-opcodes to initiate memory prefetches without requiring a dedicated instruction." Applicant's drawing and drawing description in the specification do not show that which is claimed, which is "micro-opcodes to initiate memory prefetches without requiring a dedicated instruction." Accordingly, the objection to the drawing is maintained.

16.2. That: "Applicant would like to direct the Examiner's attention to page 10 of the specification, which repeatedly describes the micro-opcodes used in the invention. Lines 12-13 of page 10 teach "each instruction word contains two major opcodes and up to three minor opcodes (micro-ops) that execute in parallel." Lines 15-17 of page 10 teach the "instruction set architecture provides micro-opcodes to initiate memory prefetches without requiring a dedicated instruction." Finally, lines 23-24 of page 10, in reference to Fig. 5, describe a "10-bit C part 506 comprising three micro-opcode fields." Applicant respectfully request that, in light of the repeated description of the micro-opcodes, the rejection to claim 45 under 35 USC § 112 [first paragraph] be withdrawn."

This is not found persuasive because applicant's claims claim micro-opcodes with a particular function, that particular function being "to initiate memory prefetches without

requiring a dedicated instruction." At most, applicant's specification has made the statement that there exist instructions to perform this function. However, 35 USC § 112, first paragraph requires that applicant detail how to perform the claimed invention, not merely that such claimed invention may exist. Merely stating that instructions exist which perform the function teaches one of skill in the art nothing about how to perform those functions in the context of applicant's system. Therefore, because there is no teaching as to how to perform the claimed invention, the rejection under 35 USC § 112, first paragraph is maintained.

16.3. That: "Applicant believes "one of" was a typographical error and in accord with the Examiners suggestion, has deleted the words from claim 46. Therefore, Applicant respectfully requests the rejection under 35 USC § 112, second paragraph be withdrawn".

This is not found persuasive because although it is noted that applicant states that the words have been deleted from the claim, claim 46 as presented in the most recent amendment contains the exact language which generated the rejection under 35 USC § 112, second paragraph. I.e., applicant did not in fact amend the claims to delete the subject language. Accordingly, the rejection is maintained.

16.4. That: "Asato makes absolutely no mention of operand bypassing. Nakada teaches a different type of operand bypassing than the claimed invention. Nakada teaches bypassing from a cache register (fig. 4, item OP11) to a second cache register (Fig. 4, items OP11, OP12, OP21, OP22). One skilled in the art would see from Fig. 4 that an operand bypassed in this manner would only be available at a later clock cycle. This is an undesirable result."

This is not found persuasive because it appears that applicant is arguing that Nakada and Asato would require more time to bypass than applicant's invention, without amending the claims to include any narrowing language related to timing constraints. As applicant is well aware, claimed subject matter, not the specification, is the measure of invention. Limitations in the specification cannot be read into the claims for the purpose of avoiding the prior art. *In re Self*, 213 USPQ 1,5 (CCPA 1982); *In re Priest*, 199 USPQ 11,15 (CCPA 1978).

"It is the claims that measure the invention." SRI Int'l v. Matshshita Elec. Corp., 775 F.2d 1107, 1121, 227 USPQ 577, 585 (Fed. Cir. 1985) (en banc).

"The invention disclosed in Hiniker's written description may be outstanding in its field, but the name of the game is the claim." In re Hiniker Co., 47 USPQ2d 1523,

1529 (Fed. Cir. 1998).

"[A]s an initial matter, the PTO applies to the verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant's specification." *In re Morris*, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997).

"limitations appearing in the specification will not be read into the claims, and ... interpreting what is <u>meant</u> by a word <u>in</u> a claim 'is not to be confused with adding an extraneous limitation appearing in the specification, which is improper'." *Intervet Am.*, v. Kee-Vet Labs., 12 USPQ2d 1474, 1476 (Fed. Cir. 1989)(citation omitted).

"it is entirely proper to use the specification to interpret what the patentee meant by a word or phrase in the claim, ... this is not to be confused with adding an extraneous limitation appearing in the specification, which is improper. By 'extraneous,' we mean a limitation read into a claim from the specification wholly apart from any need to interpret ... particular words or phrases in the claim." *In re Paulsen*, 31 USPQ2d 1671, 1674 (Fed. Cir. 1994) (citation omitted).

16.5. That: "Dissimilarly, Applicant claims operand bypassing from a cache register directly to an ALU, without an intervening register and the associated delay problems of this type of implementation. ... The operand is <u>not</u> passed back to a register. Therefore, Applicants respectfully urge that neither Nakada, Asato, nor any combination thereof anticipate the claimed invention under 35 U.S.C. § 103 because of the absence in either patent of "a multiplexer having a first input from said first input register, a second input from said second input register, and an output to said at least one second execution unit." (emphasis unchanged)

This is not found persuasive because applicant is again arguing features of the invention without amending the claims to contain narrowing language related to those features of the invention. As was clearly detailed in the last office action, Nakada did indeed teach a multiplexer (SEL21 is a mux, which has 5 inputs and one output) having a first input (line labeled RCPS1) from said first input register (OP11), a second input (line labeled RCPS2) from said second input register (OP21), and an output to said at least one second execution unit (line exiting MUX SEL21 and passing through OP21 to ALU2). Accordingly, to the extent that applicant has claimed this multiplexer, Nakada has disclosed an identical multiplexer, with input and output wiring connected in an identical manner, as to applicant's claim language. Accordingly, the rejection is maintained.

17. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) days from the mail date of this letter. Failure to respond within the period for response will result in ABANDONMENT of the application (see 35 USC 133, MPEP 710.02,

710.02(b)).

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Richard Ellis whose telephone number is (703) 305-9690. The Examiner can normally be reached on Monday through Thursday from 7am to 5pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Eddie Chan, can be reached on (703) 305-9712. The fax phone number for the USPTO is: (703)872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Richard Ellis May 18, 2004 RICHARD L'ELLIS PRIMARY EXAMINER